

WHAT IS CLAIMED IS:

1. A gas filter comprising a cylindrical case and a filter element provided inside said cylindrical case, an inlet hole and an outlet hole being formed in said cylindrical case, the gas filter having a structure such that

said filter element comprises a filtration portion formed to have a cylindrical shape;

said filter element is provided inside said cylindrical case so that the inside of said cylindrical case is divided into an inner peripheral space surrounded by the inner peripheral surface of said filtration portion, and an outer peripheral space surrounded by the outer peripheral surface of said filtration portion and the inner surface of said cylindrical case;

said inlet hole is formed in said cylindrical case so as to communicate with said inner peripheral space, said outlet hole is formed in the upper portion of said cylindrical case so as to communicate with said outer peripheral space, gas introduced from said inlet hole into said inner peripheral space is caused to pass through said filtration portion, outflow into said outer peripheral space and outflow to the outside from said outlet hole, and oil mist contained in said gas is separated and removed by said filter element, wherein

said filtration portion is composed of a first filtration material formed to have a cylindrical shape and a second filtration material formed to have a cylindrical shape in intimate contact with the outer peripheral surface of said first filtration material; and

said first filtration material is made of glass paper and said second filtration material is made of a nonwoven fabric.

2. The gas filter according to claim 1, wherein said filter element is composed of a cylindrical inner tube having a plurality of orifices formed therein, said first filtration material wound tightly around the outer peripheral surface of said inner tube, and said second filtration material wound tightly around the outer peripheral surface of said first filtration material.

3. The gas filter according to claim 2, wherein the upper and lower end portions of said inner tube having said first and second filtration materials wound therearound are closed with upper and lower end plates, a communication orifice communicating with said inner peripheral space is formed in said upper end plate, and said inner peripheral space communicates with said inlet hole via said communication orifice.

4. The gas filter according to claim 1, wherein a drain hole for draining oil accumulated inside is provided in the bottom portion of said cylindrical case.

5. The gas filter according to claim 1, wherein the base material of said nonwoven fabric is any of PET, PE, PP, rayon, cotton, and Nylon.

6. The gas filter according to claim 1, wherein the gas is CNG (Compressed Natural Gas) containing oil mist, and the gas filter is provided inside a channel connected from a CNG supply source to the

supply destination.

7. The gas filter according to claim 1, wherein said gas is an engine blow-by gas, and the gas filter is provided in a channel leading from a cylinder head of the engine in an engine blow-by gas circulation system to an intake system.

8. A gas filter comprising a cylindrical case and a filter element provided inside said cylindrical case, an inlet hole and an outlet hole being formed in said cylindrical case, the gas filter having a structure such that

said filter element comprises a filtration portion formed to have a cylindrical shape;

said filter element is provided so that the inside of said cylindrical case is divided into an inner peripheral space surrounded by the inner peripheral surface of said filtration portion, and an outer peripheral space surrounded by the outer peripheral surface of said filtration portion and the inner surface of said cylindrical case;

said inlet hole is formed in said cylindrical case so as to communicate with said outer peripheral space, said outlet hole is formed in the upper portion of said cylindrical case so as to communicate with said inner peripheral space, gas introduced from said inlet hole into said outer peripheral space is caused to pass through said filtration portion, inflow into said inner peripheral space and outflow to the outside from said outlet hole, and oil mist contained in said gas is separated and removed by said filter element, wherein

said filtration portion is composed of a second filtration

material formed to have a cylindrical shape and a first filtration material formed to have a cylindrical shape in intimate contact with the outer peripheral surface of said second filtration material; and

said first filtration material is made of glass paper and said second filtration material is made of a nonwoven fabric.

9. The gas filter according to claim 8, wherein said filter element is composed of a cylindrical inner tube having a plurality of orifices formed therein, said second filtration material wound tightly around the outer peripheral surface of said inner tube, and said first filtration material wound tightly around the outer peripheral surface of said second filtration material.

10. The gas filter according to claim 9, wherein the upper and lower end portions of said inner tube having said first and second filtration materials wound therearound are closed with upper and lower end plates, a communication orifice communicating with said inner peripheral space is formed in said upper end plate, and said inner peripheral space communicates with said outlet hole via said communication orifice.

11. The gas filter according to claim 8, wherein a drain hole for draining oil accumulated inside is provided in the bottom portion of said cylindrical case.

12. The gas filter according to claim 8, wherein the base material of said nonwoven fabric is any of PET, PE, PP, rayon, cotton,

and Nylon.

13. The gas filter according to claim 8, wherein the gas is CNG (Compressed Natural Gas) containing oil mist, and the gas filter is provided inside a channel connected from a CNG supply source to the supply destination.

14. The gas filter according to claim 8, wherein said gas is an engine blow-by gas, and the gas filter is provided in a channel leading from a cylinder head of the engine in an engine blow-by gas circulation system to an intake system.